Microdis
Innovation & Reliability

Neousys Technology

Neousys Technology designs and manufactures rugged embedded box PCs. Manufacturers' goal is to innovate and integrate feature sets into products for various vertical markets.

PATENTED EXPANSION CASSETTE

Neousys' Patented Cassette innovates a brilliant way for accommodating add-on card, not only because the modularized design makes easy installation/replacement, but also because the possibility of passive cooling for add-on card brings more reliable operation. You can install any PCI/PCIe card to expand versatility of Neousys' IPC, or choose Neousys' offer of Cassette module with pre-installed heat-spreader to include PoE+, USB 3.0 or independent graphics card.

Main Features:
- ◀ CSM-R800 - Cassette module with 4-drives hardware RAID 0/1/10, accommodating four 2.5" HDD/SSD
- ◀ CSM-POE354 - Cassette module with PCIe-PoE354at and pre-installed passive heat-spreader
- ◀ CSM-U380 - Cassette module with PCIe-USB380 and pre-installed passive heat-spreader
- ◀ CSM-NV750 - Cassette module with nVidia GTX 750 graphics card, pre-installed heat-spreader and fan
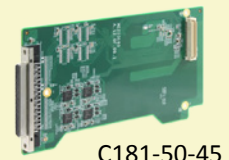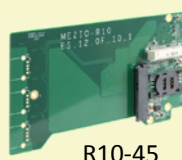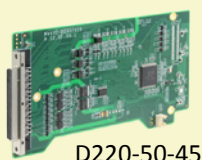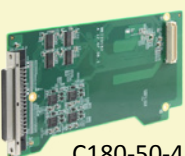
NEOUSYS TECHNOLOGY

THE MEZIO™ INTERFACE AND MODULES

MezIO™ is the interface designed for incorporating application-oriented I/O functions into a embedded system. It offers computer signals, power rails and control signals via a high-speed connector. MezIO™ is also mechanically reliable benefited from its 3-point mounted mezzanine structure. A MezIO™ module can leverage these signals to implement comprehensive I/O functions. Neousys provides various MezIO™ modules, as listed below. Users can also leverage signals/powers on MezIO™ to create a module with specific domain know-how. MezIO™ presents a cost-effective way to build a tailor-made embedded system for your application

Main Features:
- ◀ MezIO-C180: 4x RS-232/422/485 ports and 4x RS-232 ports
- ◀ MezIO-C181:4x RS-232/422/485 ports and 4x RS-422/485 ports
- ◀ MezIO-D220: 8-CH isolated digital input and 8-CH isolated digital output
- ◀ MezIO-D230: 16-CH isolated digital input and 16-CH isolated digital output
- ◀ MezIO-V20: ignition power control function and 1x mini-PCIe socket for in-vehicle usage

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| C180-50-45 | D220-50-45 | R10-45 | V20-45 | C181-50-45 |

POC-120 - Ultra-compact general-purpose embedded controller
Main Features:

- Low-profile, ultra-compact 15cm x 10cm x 3.4cm footprint
- Intel® Atom™ E3826 1.46GHz dual core CPU
- 2x GbE, 2x USB2.0 & 1x USB3.0
- 1x RS-232/422/485 port & 1x RS-232 port
- MezIO™ interface for easy expansion (in version POC-120MZ)
- 8 ~ 35V DC power input
- -25 ~ 70°C extended operating temperature
- I/O expansion interface for ODM projects

POC-120 is a low-cost, entry-level embedded controller with ultra-compact dimensions. POC-120MZ is version of computer with MezIO™ expansion. By customizing a mezzanine board, you can have versatile I/O functions and make POC-120MZ not only an ordinary ultra-compact controller, but also a tailor-made embedded system for your specific application f.e. IPC with up to 10x COM ports.

Nuvo-5000LP – High performance multi-purpose IPC
Main Features:

- Fanless, low-profile design with only 77mm height
- Support 6th Gen Intel® Core™ i7 / i5 / i3 35W/65W socket-type CPU
- MezIO™ interface for easy expansion
- Up to 6x GbE LAN, 4x USB3.0 & 4x USB2.0
- 2x RS-232/422/485 & 2x RS232
- 2x 2.5" SATA HDD/SSD with RAID 0/1 (One hot-swappable)
- VGA/DVI/DP support triple independent display and 4K2K resolution
- 2x mini-PCIe socket with front-accessible and internal SIM card socket
- 8 ~ 35V DC power input
- -25 ~ 70°C extended operating temperature

Nuvo-5095GC - World's first wide-temperature rugged GPU computer
Main Features:

- Supports nVidia® GeForce® GTX 950 / 1050 GPU
- Supports 6th-Gen Intel® Core™ i7/i5 LGA1151 CPU
- MezIO™ interface for easy expansion
- 6x GbE LAN, 4x USB3.0 & 4x USB2.0
- 2x RS-232/422/485 & 2x RS232
- 2x 2.5" SATA HDD/SSD with RAID 0/1
- VGA/DVI/DP support triple independent display and 4K2K resolution
- 2x mini-PCIe socket with front-accessible and internal SIM card socket
- 8 ~ 35V DC power input
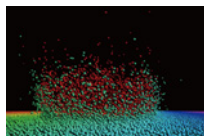- -25 ~ 60°C extended operating temperature

Nuvo-5095GC opens a new chapter for industrial computers. Neousys' patented Cassette technology and an innovative thermal design helps to effectively dissipate the heat generated by GPU, thus make this compact system capable to operate reliably at 60°C with 100% GPU loading.

Possible Applications For GPU-Intensive Computing:

| Autopilot | Virtual Reality | AI Inference | Virtual Reality |

Nuvis-5306RT - Powerful vision controller with vision-specific I/O, real-time control and GPU-computing

Main Features:

- Integrated vision-specific I/O:
  - 4-CH CC/CV lighting controller
  - 4-CH camera trigger outputs
  - 1-CH quadrature encoder input
  - 8-CH isolated DI and 8-CH isolated DO
- Patented MCU-based, real-time I/O control by DTIO V2 and OpenMCU firmware
- Built-in camera interfaces
  - 4-CH IEEE 802.3at Gigabit PoE+ ports
  - 4-CH USB 3.0 ports
- Supports nVidia® GeForce® GTX 950 / 1050 GPU
- Supports 6th-Gen Intel® Core™ i7/i5 LGA1151 CPU
- 6x GbE LAN, 4x USB3.0 & 4x USB2.0
- 2x RS-232/422/485 & 2x RS232
- 2x 2.5" SATA HDD/SSD with RAID 0/1
- VGA/DVI/DP support triple independent display and 4K2K resolution
- 2x mini-PCIe socket with front-accessible and internal SIM card socket
- 8 ~ 35V DC power input
- -25 ~ 60°C extended operating temperature

Nuvis-5306RT integrates every single function you need for Machine Vision applications in a compact footprint, including exceptional computing power, built-in camera interfaces and real-time vision-specific I/O control. All the vision-specific I/O are managed by Neousys' patented MCU-based architecture and DTIO/OpenMCU firmware to guarantees microsecond-scale real-time I/O control. Combining built-in PoE+ and USB 3.0 interfaces and the expandability for CameraLink and CoaXPress, Nuvis-5306RT is the ideal platform for demanding Machine Vision applications.

Nuvo-5100VTC – State of art railway controller with EN50155 certificate

Main Features:

- Support 6th Gen Intel® Core™ i7 / i5 / i3 socket-type CPU
- 4x USB3.0 & 4x USB2.0
- 2x RS-232/422/485 & 2x RS232
- 4x 802.3at Gigabit PoE+ ports via M12 connectors
- On-board CAN bus for in-vehicle communication
- 4-CH isolated DI and 4-CH isolated DO
- 2x 2.5" SATA HDD/SSD with RAID 0/1 (One hot-swappable)
- VGA/DVI/DP support triple independent display and 4K2K resolution
- 4x mini-PCIe socket with front and internal accessible SIM card sockets
- 8 ~ 35V DC power input with built-in ignition control
- -40 ~ 70°C extended operating temperature
- EN 50155 certificate

Nuvo-5100VTC offers 4x 802.3at PoE+ ports to supply 25W power to the connected device. They are implemented using M12, x-coded connectors, which guarantee extremely rugged connectivities in shocking/vibrating environments. Two more Gigabit Ethernet ports by RJ-45 are available for data communication. You can also utilize four internal mini-PCIe sockets with corresponding modules for 3G/4G/WIFI communication. In addition, Nuvo-5100VTC integrates CAN bus for in-vehicle communication, and isolated DIO for sensor/actuator control. Combing ignition power control and dual-drive RAID storage, Nuvo-5100VTC is simply the one to satisfy all your application demands. Nuvo-5100VTC is shipped with Neousys' patented damping bracket to protect hard drives against shock and vibration in the vehicle.

NUVO-6000 - Fanless Box PC with up to 5x PCIe/PCI Expansion Slots

Main Features:

- Supports 6th Gen Intel® Core™ i7/i5/i3, Pentium and Celeron® LGA1151 CPU
- Up to five expansion slots: x16 PCIe, x8 PCIe and three PCI slots
- -25 ~ 60°C extended operating temperature
- 2x GbE, 4x USB 3.0 and 5x COM ports
- Dual DVI display outputs
- Up to 3x 2.5" SATA disks and 1x mSATA socket
- Wall-mounting, DIN-rail mounting and rack-mounting available
- Automatic temperature sensing and fan control (optional)

Nuvo-6032 series is a perfect replacement of rack-mount 19" or wall-mount PC systems. It delivers the same computing power as traditional rackmount PCs, but in a more compact form-factor and fanless operation. When add-on cards are installed, it's crucial to maintain a reasonable temperature inside the chassis. Nuvo-6032 has well-designed air inlet apertures and smart fan option to create regulated air flow through all cards, thus effectively brings out the heat and significantly increases the system reliability.

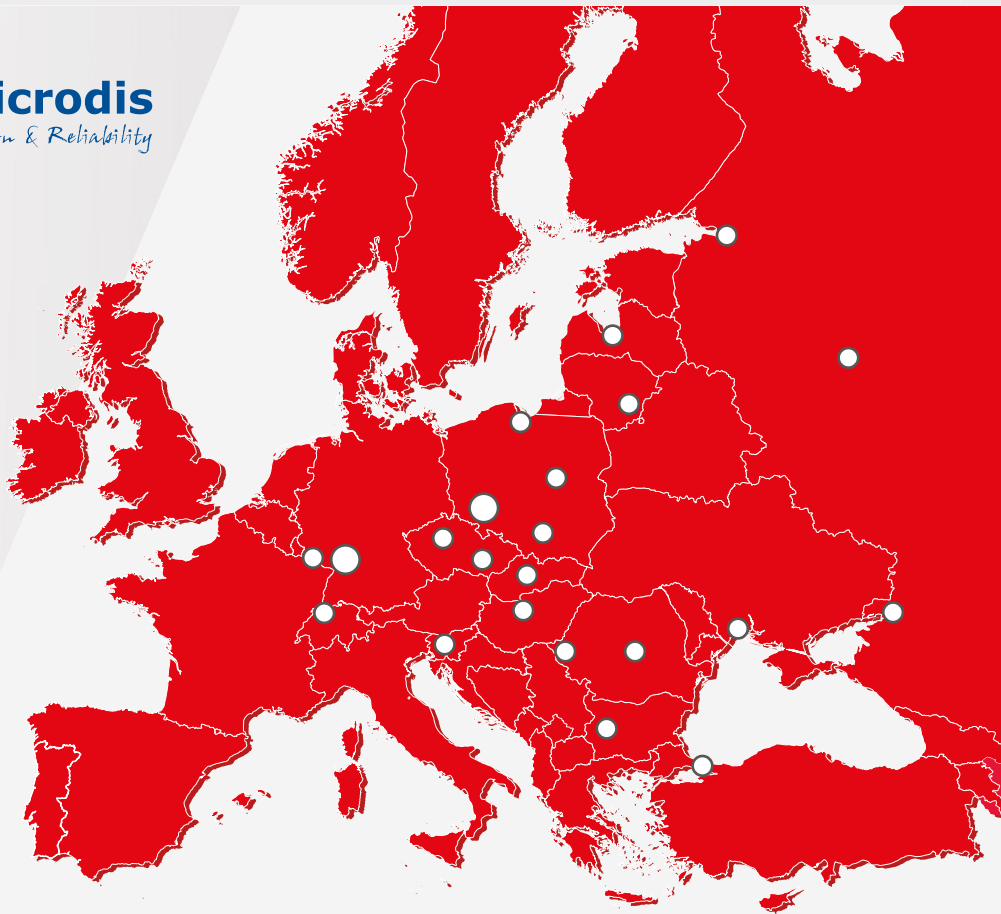| Item	Nuvo Fanless Box PC	IPC	
		SBC	ATX
Front-side I/O	Y	N	N
Fanless	Y	N	N
Slot	2/5	1-20	5
Rack	Y	Y	Y
Power input	8~35V	110/220V AC	110/220V AC
Temp.	-25°C~60°C	0°C~50°C	0°C~50°C
Price	$ $	$ $ $	$ $

Nuvo-6000 Series: ΔT* < 5°C

Traditional PC: ΔT* > 10°C

Neousys Fanless Box PC provides low power consumption and can truly operate (100% CPU loading) under wide temperature range from -25°C to 60°C, so it can be used in industrial environments. Moreover traditional 19" PC has less efficient air flow due to turbulence caused by multiple fans (chassis/CPU/PSU) and cables. Nuvo-6000 maintains lower internal temperature for add-on cards for better reliability. *ΔT – temperature fluctuation inside computer chassis

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GSM/3G/LTE   GPS/GNSS   LED   Embedded   Passive   Semicon   Electromech